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DEVISING DOCTRINE FOR THE
BRADLEY FIGHTING VEHICLE PLATOON
DISMOUNT ELEMENT -- FINDING THE
RIGHT STARTING POINT

A Monograph

by

Major John M. Carmichael

Infantry

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School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas

First Term AY 88-89

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SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release distribution unlimited		
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION School of Advanced Military Studies, USAC&GSC		6b. OFFICE SYMBOL (if applicable) ATZL-SWV	7a. NAME OF MONITORING ORGANIZATION		
6c. ADDRESS (City, State, and ZIP Code) Fort Leavenworth, Kansas 66027-6900			7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING / SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (if applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8c. ADDRESS (City, State, and ZIP Code)			10. SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
			WORK UNIT ACCESSION NO.		
11. TITLE (Include Security Classification) Devising Doctrine for the Bradley Fighting Vehicle Platoon Dismount Element--Finding the Right Starting Point (U)					
12. PERSONAL AUTHOR(S) Major John M. Carmichael, USA					
13a. TYPE OF REPORT Monograph		13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (Year, Month, Day) 88/12/9		15. PAGE COUNT
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	Bradley Fighting Vehicle, Firepower, Maneuver, Squad, Leadership, Protection, time-space, Team, Fire team, Infantry, Lt Weston, Cpt McIlmail		
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This monograph assesses the effectiveness of the current Bradley Infantry Squad organization. The premise is that the battlefield should be the start point for determining the correct organization of the dismounted infantry squad. The monograph first highlights problems with the current organization and doctrine. Second, it examines three historical examples where organizations were tailored to the enemy and the battlefield conditions. Third, using the dynamics of combat power in FM 100-5, Operations, (firepower, maneuver, leadership, protection) this monograph analyzes the battlefield and the impact of the moral domain, time-space compression and firepower on infantry combat. The emphasis of this analysis is on the dynamics of small infantry units in combat. The purpose of the analysis is to determine how these dynamics influence the organization and discusses the viability of the current organization. The monograph concludes that the current organization should be changed, and that three or four-man teams be adopted.					
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL Maj John M Carmichael			22b. TELEPHONE (Include Area Code) (913) 684-2138		22c. OFFICE SYMBOL AZTL-SWV

**Devising Doctrine for the Bradley Fighting Vehicle Platoon
Dismount Element-- Finding the Right Starting Point**

by
Major John M. Carmichael
Infantry

Accession For	
NTIS - CRA&I	<input checked="checked" type="checkbox"/>
DTIC - TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution /	
Availability Codes	
Avail and/or Special	
A-1	

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Fort Leavenworth, Kansas**

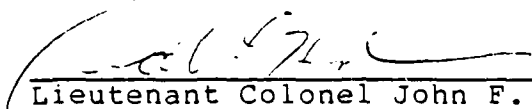
9 December 1988

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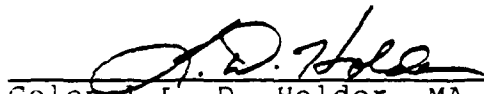
Name of Student: Major John M. Carmichael
Title of Monograph: Devising Doctrine for the Bradley Fighting Vehicle Platoon Dismount Element--Finding the Right Starting Point

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Advanced Military
Studies



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Director, Graduate
Degree Programs

Accepted this 16th day of December 1988.

ABSTRACT

DEVISING DOCTRINE FOR THE BRADLEY FIGHTING VEHICLE PLATOON DISMOUNT ELEMENT-- FINDING THE RIGHT STARTING by MAJ John M. Carmichael, USA, 40 pages.

This monograph assesses the effectiveness of the current Bradley Infantry Squad organization. The premise is that the battlefield should be the start point for determining the correct organization of the dismounted infantry squad.

The monograph first highlights problems with the current organization and doctrine. Second, it examines three historical examples where organizations were tailored to the enemy and the battlefield conditions. Third, using the dynamics of combat power in FM 100-5, Operations, (firepower, maneuver, leadership and protection) this monograph analyzes the battlefield and the impact of the moral domain, time-space compression and firepower on infantry combat. The emphasis of the analysis is on the dynamics of small infantry units in combat. The purpose of the analysis is to determine how these dynamics influence the organization, training and employment of small infantry units and their leaders. Finally, the monograph assesses the current organization and discusses the viability of the current organization.

The monograph concludes that the current organization needs to be changed. Permanent three-man or four-man teams organized around complementary weapons, trained for flexible, rapid action should form the foundation of the Bradley equipped infantry squad.

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I. INTRODUCTION

The Bradley Fighting Vehicle (BFV) has expanded the capabilities of the infantry. It has also brought new challenges. The commander of an M-2 equipped company must train vehicle crews and dismounted soldiers to be proficient in gunnery and maneuver--a difficult and complex challenge. Accordingly, a great deal of time and effort have been spent trying to find an organization and doctrine that will maximize the capabilities of the vehicle and the dismounted infantry.

Historically, the individual soldier has been one of the few constants on a continually evolving battlefield. In an effort to understand how Bradley infantry squads must be organized, equipped and trained, this paper analyzes the forces that govern the battlefield . Moreover it suggests the battlefield should be the start point for determining the correct organization of the dismounted infantry squad.

First, I will outline the source of Bradley doctrine and some of the resultant problems facing units in the field. Second, I will give some historical examples which illustrate successful methods used to improve fighting efficiency by adapting to the nature of the battlefield. Third, I will analyze the battlefield and the impact of the moral domain, time-space compression and firepower on infantry combat. Finally, I will assess the current organization in light of the foregoing analysis and discuss the viability of the current organization.

II. THE PROBLEM

Infantrymen in Bradley Fighting Vehicle equipped organizations must accomplish their battlefield missions with fewer men than other infantry organizations. To complicate matters, the BFV infantryman must fight on a battlefield far more lethal and mobile than ever before. To get the greatest benefit out of these few infantrymen we must have the right doctrine and the right organization. There are many possible starting points for the development of doctrine for the Bradley equipped infantryman. The problem is finding the right start point, the one that will maximize survivability and mission accomplishment.

Before fielding the Bradley Fighting Vehicle, the U.S. Army Infantry School (USAIS) developed doctrine for the Bradley squad and platoon by extrapolating from M113 APC squad and platoon doctrine.¹ This was a conservative first step which recognized the capabilities of the vehicle but failed to recognize the difficulties in training and employing BFV infantry units.

The initial doctrine attempted to apply an old organization to a new system.² The doctrine focused on the vehicle and its interface with the dismounted infantrymen. The doctrine writers assumed Bradley infantry would fight like APC infantry and any changes would center on the BFV's capabilities. The basic squad organization would stay the same.

Doctrinally, the M113 squad consisted of a carrier team and dismount team. The 1976 version of FM 7-7 designated a carrier team of five men and a dismount

team of six men. The leader could modify the squad organization based on METT-T to a two-man carrier team and a nine-man dismount team.³ The squad leader kept the Dragon and the M-60 nearby so he could influence their employment.

Like the M113 dismount team, the Bradley's dismount team was originally equipped with the M-60 machine gun. The M-60 machine gun is a crew-served weapon not easily handled in the assault because of its weight, size, and feeding. It is best used to provide a base of fire for the dismount team. The M-60 machine gunner was eliminated when the Bradley squad was reduced from ten to nine men.

The nine-man Bradley infantry squad consists of a three-man fighting vehicle team and a six-man rifle team. The Bradley squad's two automatic riflemen are equipped with the SAW. The SAW provides sustained automatic fire and is light enough for use in the assault. This makes the dismount element more agile and flexible.

A source of difficulty for the training and employment of the Bradley infantry units is the difference in capability between the vehicle and the dismounted infantry. The BFV has a maximum cross-country speed of about 48 kmph and its weapons are effective at ranges out to 3750 m. Comparatively, the dismounted infantryman can walk at a cross-country speed of 3-5 kmph and his weapons are effective out to 1000 m.⁴ Recognizing this disparity, leaders and commanders must learn to think flexibly to maximize the capabilities of both the vehicle and the infantry.

The terrain desired for optimum employment of each element is different. The BFV is best employed where it can make use of long range fields of fire and

multiple positions, while dismounted infantryman are best employed in restrictive terrain with fields of fire under 1000 m. The dismounted infantryman must use terrain that limits the effectiveness of the enemy's direct and indirect fires.

In the defense, the BFVs are best employed where they can take advantage of mobility, speed, flexibility, and firepower while dismounted infantry are best employed in relatively fixed positions where their capabilities can be exploited. Bradley doctrine handles these issues well but in practice these issues are complicated by increased demands for sustainment, security, fire coordination, and command and control.

Other problems face Bradley leaders, such as the shortage of dismounted infantrymen, the question of who dismounts, training management, and training standards. Adding to this complexity is the fact that the platoon leader, platoon sergeant, and two of the three squad leaders are vehicle commanders. When they are training vehicle skills--gunnery and maneuver-- the experienced teachers in the platoon are not available for training the rifle teams.

Successful employment of the BFV and the dismounted infantry requires effective training, doctrine and organization. In order to develop an effective fighting unit, leaders must have the time and resources to train soldiers in their respective mounted and dismounted infantry skills. A successful organization is an efficient fighting organization and an organization convenient for training. Optimally, we can obtain both in the same formation. Let's begin with the infantryman and his battlefield. The infantryman's mission is to close with the

enemy by means of fire and maneuver and to destroy or capture him or repel his assault by fire, close combat and counterattack. The place where the infantryman earns his pay is traversing or defending that last 300 yards, the most deadly ground for the infantryman.

III. HISTORICAL EXAMPLES

"The study of the past alone can give us a true perception of practical methods, and enable us to see how the soldier will inevitably fight tomorrow."⁵

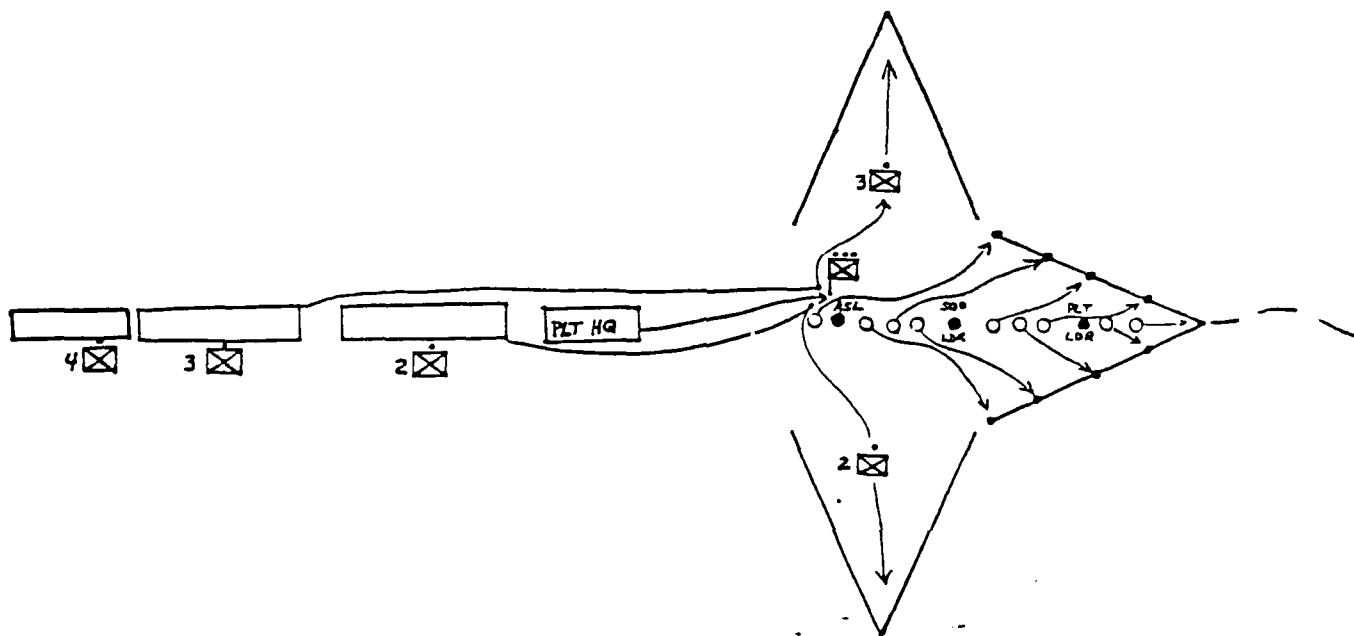
Is it important to examine the forces governing the battlefield in an effort to find an efficient fighting organization tailored to the enemy and the battlefield conditions? Reason and history suggest that it most definitely is. History provides several examples.

1LT LOGAN WESTON

1Lt Logan Weston served with Merrill's Marauders in the CBI theater and commanded the Intelligence and Reconnaissance platoon of one of the regiments.

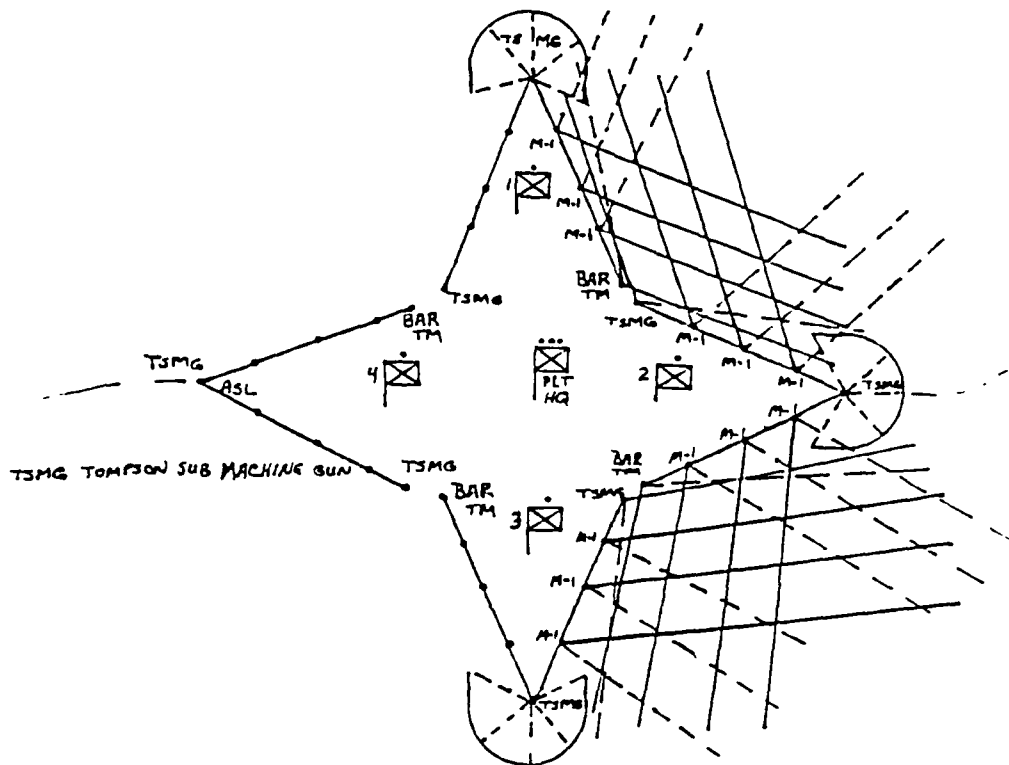
"In twenty-three battles and skirmishes, my platoon lost three men killed and four wounded. It was accredited with a known two hundred fifty four (254) and a probable additional four hundred sixty (460) members of enemy forces killed. The number of enemy wounded could not be estimated."⁶

Lt Weston's techniques proved themselves in a variety of terrain and during the conduct of defensive and offensive operations. Additionally, Lt Weston's techniques proved useful in establishing a perimeter and providing quick all around security upon enemy contact.



Lt. Weston's platoon deployment. Figure 1.

In the defense, delay, actions on contact, and in the occupation of a bivouac area, Lt Weston's platoon used squad wedges which formed a four pointed star (Figure 1). The enemy attacked into a V-shaped ambush regardless of the direction from which the enemy approached Lt Weston's platoon (Figure 2).⁷



Lt. Weston's platoon in hasty defense. Figure 2.

In the attack formation helped in achieving flanking fire. His techniques facilitated rapid action on contact and the ability to rapidly shift from attack to defense.

Lt Weston's organization and techniques were based on the tactics of his enemy

and an innovative adaptation of weapons, organization, and tactics, to the factors of METT-T. The organization and techniques proved effective in providing a rapid effective response, good command and control, and effective control of fires. The techniques were flexible and could be adapted to all missions and terrain the platoon faced.

COL JAMES C. FRY

Col Fry commanded a regiment of the 88th Infantry Division in Italy during World War II. The 88th Division was the eighth of fourteen draftee divisions formed during World War II. It turned out to be one of the hardest fighting and most capable U.S. Divisions in the War. Major General von Shellwitz, commander of the 305th German Division, had noted, "Once we identified the US 88th Division, we knew where the main effort would be." Other indicators were "German commanders were found to have shifted their own best units to face the 88th , which was referred to as "assault troops." In other words, the Germans did treat the 88th Division as an elite unit."

In the fighting around San Biago, Italy, in May 1944 Col Fry went to the front line to exert his personal influence and realized that;

"The pre-battle training of the regiment had not included team-type of instruction that required individual initiative under such conditions. Men were brave enough, but they didn't know exactly what was expected of them. Everyone hugged the ground and waited. To rise and issue orders would be equivalent to suicide."

Fire and movement were common practice at this time. What Col Fry did was to supplement doctrine by developing Assault Battle Drill.

"...the purpose and need for Assault Battle Drill is to outline that training necessary to instill confidence, individual initiative, and aggressive behavior on the part of individual soldiers and small-unit commanders when conditions of close combat prevent squad and platoon leaders from giving adequate verbal orders or recognizable arm-and-hand signals."¹⁰

The tremendous success of Col Fry's regiment in the advance down the Santerno Valley in September 1944 was attributed to the successful techniques developed by Col James Fry.¹¹

Col Fry trained his soldiers in teamwork from two men up to platoon. Squads and platoons were broken down into fire support and maneuver elements, as the doctrine of the time indicated. The doctrine was supplemented with training in teamwork which provided for more effective action under fire. The idea was to have the minimum number of soldiers exposed at any given time and the maximum number of soldiers firing. Leaders and soldiers were trained in the techniques required for successful application of this drill.¹²

CAPTAIN JAMES F. McILMAIL

Captain McIlmail commanded B company 1st Battalion, 318th Infantry regiment, 80th Division. Cpt McIlmail

"...believed his company was suffering too many casualties in attack, and because he felt that the company was not obtaining the results desired of it, [He] worked out a new formation for his rifle squads. [He] designed the plan to minimize the possibility of casualties, and at the same time obtain maximum effectiveness of the squad's fire power."¹³

Cpt McIlmail found that his squad leaders had difficulty in maintaining control over their entire squad in the squad column and wedge formations. The men in the rear part of the formations took too long to get up into positions where they could effectively contribute to the battle.

His squad leaders had difficulty in controlling all the men in the squad when employed as skirmishers. Additionally, he felt that he could not obtain full advantage of the squad's firepower.

Cpt McIlmail reorganized his squads to overcome the difficulties his men were having. Trying something new in combat is no small feat. He "discussed his plan thoroughly with his platoon leaders and his men, who rehearsed and perfected the plan during rest periods before testing the plan in combat."¹⁴

Rifleman		Scout
TM #3	Most Experienced Rifleman	
	Asst BAR	
Rifleman		
	Ammo Bearer TM#1	SQD LDR
Rifleman		
	BAR	
TM#2	ASL	
Rifleman		Scout

CPT McIlmail's squad organization. Figure 3.

The twelve-man squad was broken down into four groups. The two scouts continued to operate as before. The remainder of the squad was broken down into a four-man team and two three-man teams. The four-man team consisted of the squad leader and the three-man BAR team. The two three-man teams of riflemen were under the control of the assistant squad leader, who was in command of one team. The other team was lead by the most experienced rifleman (most senior PFC).

The span of control for the squad leader was decreased by the adoption of this formation. The squad could move and react more effectively. The formation facilitated the control and fire of the BAR, allowing its fires to be brought to bear rapidly where it was needed. In the defense the triangular formation provided protection against attack from any side.

The casualty rate among replacements is normally very high so it is instructive to see that

"Use of the triangular squad formation showed a reduction of casualties among green replacements. From the time they first joined the unit, they were put under the supervision of one of the experienced group leaders. Even in the excitement of first combat, it was easy for the replacements to follow their small unit leaders and to look to them for instructions. In turn, it was easy for the group leaders to correct and advise the green replacements, and to give them a feeling of confidence and security which could not be conveyed under the leadership of one or two men."¹⁵

Cpt McIlmail's NCO's and soldiers felt this organization was more effective than the standard one and it helped to reduced casualties. An organization which is

effective will improve the confidence and teamwork of the soldiers.

Cpt McIlmail reorganized the squads in order to increase the effectiveness and responsiveness of his platoons and company. His reorganization decentralized command and control and improved the survivability of replacements through a more effective leader to led ratio.

The creation of team work and interdependence in infantry organizations was a key element of success in the cases of Weston, Fry and McIlmail.

"With unity and sensible formation men of an individual value one-third less beat those who were individually their betters."¹⁶

There is a synergistic effect that is important to close combat which each of these organizations attained. They all developed methods for fighting efficiently and used techniques that developed aggressiveness and teamwork. The increased effectiveness improved unit confidence which in turn improved unit morale and fighting effectiveness.

The Marine Corps adopted the three-man fire team and found it to be valuable while fighting in the Pacific. Later, it was recommended "that the squad be organized into four three-man fire groups." However, the Marine Corps went to a four-man fire team built around the BAR because it "was thought to be more in line with Marine triangular organization, better able to absorb battle casualties, and easier to control." The fourth man was the assistant BAR man.¹⁷

The effectiveness of small fighting teams was established by the Greeks 3000 years ago. Since then, the Romans, units on both sides of the American Civil War

and others have used three-man and four-man teams with great effect.¹⁸ The U.S. Marine Corps and armies such as Red China's and Israel's have used three-man and four-man teams with great effect. These small teams improve command and control, increase the flexibility and effectiveness of the infantry, and facilitate cohesion.¹⁹

IV. THE BATTLEFIELD

1. The nature of the battlefield.

From the dawn of early warfare to the introduction of the rifle, conventional infantrymen fought each other at close range and in close order. With the rifle came revolutionary changes to the battlefield. World War One combined the machine gun, improved artillery, and barbed wire to form a continuous front and made decisive maneuver in France impossible. Mechanization restored mobility to the battlefield but changed the nature of fighting.²⁰

"...the musket had given way to the muzzle-loading percussion-capped rifle, a weapon with an effective range of 500 yds, which could outrange case and canister fired either by smooth-bore or rifled guns. The whole of fire tactics underwent a profound change. The gun had to fall back behind the infantry and become a support weapon, and the infantry fire-fight opened at 400 yards' range instead of 50 to 100 yards. The result of this long range fire-fighting was that the bayonet assault died out; individual good shooting became more effective than volley firing, and for full effectiveness it demanded initiative and loose order."²¹

The battlefield had become an empty place. The dismounted infantry burrowed into the ground and camouflaged themselves. The artillery backed up behind the hill to protect itself from the direct fire battle. Armored vehicles became the heart of

the attack. The number of soldiers supporting the fighters increased, while the number of soldiers in the direct fire battle decreased. The infantryman's mission did not change, but the nature of fighting did.

In the attack, the infantry protects and facilitates the forward movement of armor. In the defense, the infantry provides a framework within which armored vehicles operate.

The attacker uses direct and indirect fires to keep the defenders head down while he advances using the available protection of the terrain. The defender uses obstacles and fires to separate elements, slow or stop the attacker in order to concentrate fires to destroy him.

Mechanization brought increased firepower, greater range, and speed of operations. These changes placed a greater strain on the soldier's morale, compressed time and space, and increased weapon lethality.

2. The Moral Domain

"In war the moral is to the material as three to one."²²

The moral domain is probably the most neglected domain in peace and the most important in war. The conditions of fear, and the physical exhaustion which magnifies that fear, cannot be completely replicated in training. There are many factors that impact on unit morale and as many as possible should be built into our organizations, doctrine, and training.

The squad, the crew, and the rifle team require an organization during

peacetime that facilitates cohesion in war. The increased lethality and dispersion on the battlefield require organizations of great moral strength. We cannot expect buddy teams to emerge spontaneously. They must be developed. High personnel turnover rates will reduce the ability of ad hoc buddy teams to develop effective cohesion and moral strength.

"In modern armies where losses are as great for the victor as for the vanquished, the soldier must more often be replaced. In ancient battle the victor had no losses. To-day the soldier is often unknown to his comrades. He is lost in the smoke, the dispersion, the confusion of battle. He seems to fight alone. Unity is no longer insured by mutual surveillance. A man falls, and disappears. Who knows whether it was a bullet or the fear of advancing further that struck him! The ancient combatant was never struck by an invisible weapon and could not fall in this way. The more difficult surveillance, the more necessary becomes the individuality of companies, sections, squads. Not the least of their boasts should be their ability to stand a roll call at all times."²³

The six man rifle team is equipped with two SAWS, two M203 grenade launchers, a rifle and a DRAGON.²⁴ Doctrinally the dismounted infantry is expected to form ad hoc teams to execute drills in varying circumstances. Drills are valuable for developing team work and reducing the time it takes to execute certain missions. For the individual soldier initiative and aggressiveness are based on the confidence other soldiers will support his actions. This confidence is not easily transferred and is best maintained by small permanent teams.

The basic team should combine leadership and complimentary weapons to maximize cohesion. The team's size should facilitate command and control, a sense of responsibility and accountability to others, and the rapid assimilation of replacements. The training of the team should minimize the impact of leader loss

and the uncertainty caused by rapidly changing situations.

FM 7-7J and the Mission Training Plan for the M-2 equipped platoon outline good techniques for fighting in built up areas and against an enemy in prepared positions. For example: it recommends organizing room clearing teams of at least three and no more than four men; and an assault element organized into two-man or three-man teams for clearing a trench line.²⁵ Permanent teams organized to accomplish any of these missions would reduce the time necessary to prepare a platoon to assault. It would facilitate and develop cohesion, teamwork, and confidence for the conduct of the most difficult missions facing the infantryman.

An organization based on teams that facilitate fighting in the most difficult types of combat should be easily adapted to less difficult missions such as the hasty attack of an enemy in hasty positions. The often quoted observation by Ardant duPicq sums up the importance of cohesion to the will to fight.

"Four brave men who do not know each other will not dare to attack a lion. Four less brave, but knowing each other well, sure of their reliability and consequently of mutual aid, will attack resolutely."²⁶

The organization must be capable of offensive or defensive action. We should organize teams around an automatic weapon and should include complimentary weapons. For example, a grenade launcher can cover the dead space of the SAW and a rifleman carrying a DRAGON or LAW can destroy armored vehicles or enemy positions. Based on doctrine, the three and four man teams seem to fit most if not all possibilities.

Ardant duPicq noticed that increased dispersion caused a strain on the morale of the soldier.

"Discipline in battle becomes the more necessary as the ranks become more open, and the material cohesion of the ranks not giving confidence, it must spring from a knowledge of comrades, and a trust in officers, who must always be present and seen."²⁷

An organization that by design creates small teams with interdependent weapons will go a long way toward establishing cohesion. Thus, a five-man team seems to be too large as it must be broken up routinely for room, bunker, and trench clearing operations. Three-man or four-man teams are optimum.

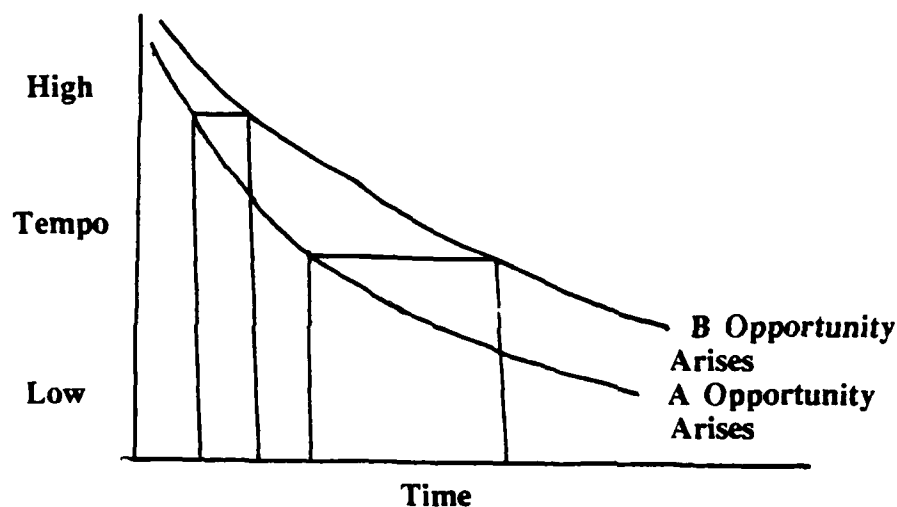
3. Time and Space Compression.

"The main indicator of dynamism on the battlefield is the destructive fire power and rapidity of fire of modern weapons. It is precisely this indicator that predetermines the frequent emergence of critical situations in battle and fierce competition for time in combat. The value of minutes and seconds in battle has soared."²⁸

The compression of time and space has changed the battlefield. As a result leaders and their units require many changes to fight effectively. We will look at the impact of time-space compression on the elements of combat power and the decision cycle to determine how changes can be accommodated.²⁹

MANEUVER

The improved speed, range, and lethality of weapons increased the dynamic nature of battle and increased the frequency of critical situations requiring action. The window of opportunity to respond to a critical situation is a function of battle tempo. As battle tempo increases the window of opportunity narrows.

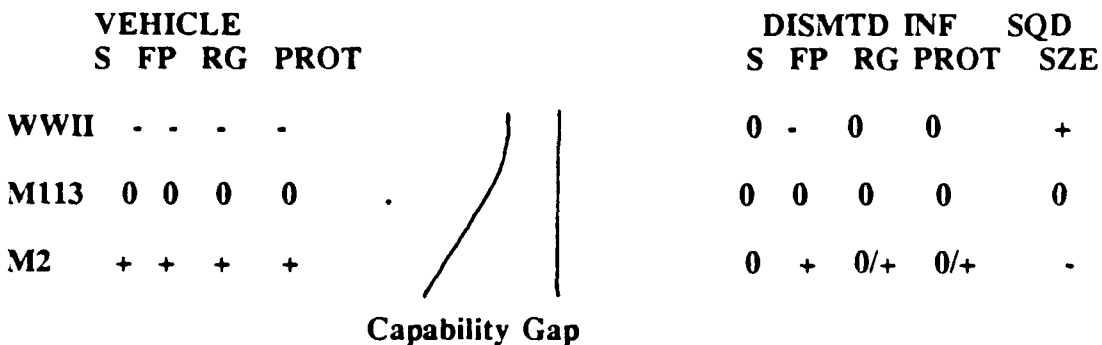


The relationship of tempo to windows of opportunity. Figure 4.

This chart illustrates the relationship. The horizontal distance from A to B is the window of opportunity. As the tempo increases the window of opportunity narrows thus decreasing the time available for decision and action. Operating in narrow windows of opportunity demands that we find organizations, methods, techniques and procedures which reduce the time to execute the OODA (Observe, Orient, Decide, Act) loop.

FIREPOWER AND PROTECTION

Time-space compression impacts on vehicles and dismounted infantryman. The infantryman's vehicle has improved to meet the needs of the battlefield and compensate for the shortcomings of the infantryman. For the dismounted infantryman, improvements in firepower, range and protection have not kept pace with the demands of the changing battlefield. As the capability gap has increased the size of the dismounted infantry squad has decreased. This chart illustrates this relationship.



- = LESS

-/0 = SLIGHTLY LESS

0 = NEUTRAL OR BASE

0/+ = SLIGHTLY MORE

+ = MORE

S = SPEED

FP = FIREPOWER

RG = RANGE

PROT = PROTECTION

SQUAD SIZE = SQUAD SIZE

Comparison of U.S. Mechanized Infantry Capability. Figure 5.

The capability gap between the vehicle and the dismounted infantryman is more significant today than ever before. The BFV's range, lethality of weapons, speed, and protection is an improvement in response to the demands of the environment. These improvements have allowed the BFV to adapt to time-space compression. The infantry has not had similar improvements. The speed of the infantry and the range of its weapons (except anti-armor) remained about the same while the lethality of the infantry squad's weapons increased. The decreased size of the infantry squad makes the dismounted infantry more dependent on the vehicle. The vehicle is also dependent on the limited amount of infantry for protection. Thus, there is an increased demand for mutual support.

The BFV is more than support or transport, it is a complementary system for the infantry. The vehicle's increased capabilities compensate for the relative inability of the infantry to adjust to time-space compression and increased lethality.

To compensate for time-space compression the dismounted infantry must adopt new methods and techniques to facilitate rapid action. The infantry must reduce the time to navigate the OODA loop to operate effectively in narrow windows of opportunity. Acting rapidly and creating situations to which the enemy must respond will help maintain the initiative and operational tempo. The value of possessing the initiative has increased. The side with the initiative will dictate the tempo of operations and very often the beginning of the opportunity window. This means that the one without the initiative, unless he anticipates an event, will not begin the OODA loop until the opportunity has presented itself and he has

recognized it. Thus at a high tempo of operation the one lacking the initiative may have to navigate the OODA loop faster in order to seize the initiative. Thus, most unplanned actions requiring detailed coordination will be ineffective or impossible.

LEADERSHIP

The compression of time and space has placed a burden on leadership as well. The decision making process must be made more rapid.

Time	+	more time I little experience	more time II more experience
	-	little time III little experience	little time IV more experience
		-	+
		Experience	

The impact of time-space compression on leadership. Figure 6.³⁰

No matter how thorough their training, junior leaders placed in combat will have only limited experience on which to base decisions. We cannot totally duplicate war's fear and moral strain in peacetime. Narrower windows of

opportunity will allow only limited time for assessment and decision. Leaders will be making decisions in block III most of the time. We need to adopt techniques and organizations to operate effectively in the block III environment.

The net effect of this decrease in available time is the need to decentralize command and control. The time necessary to request a commander to make a decision on a changing situation he cannot see will make his decision late and possibly irrelevant. Improved command and control techniques, Auftragstaktik, mission type orders, situation assessment techniques, flexible organizations, and drills, will reduce the time to execute the OODA loop.

Once the platoon leader makes the decision to commit his squads to battle the fight belongs to the squad and team leaders. The platoon leader, even when operating well forward, will have only a limited impact on the close direct fire battle. His primary function is to control and employ uncommitted teams and supporting fires. Direct and indirect fire support must be quickly coordinated with movement so the infantrymen can secure terrain, and reduce obstacle's or enemy positions. Thus, an effective squad and platoon organization that is flexible, capable of rapid action, improves cohesion and moral strength is essential.

Bradley infantrymen may have to dismount on short notice and immediately face an unfamiliar environment. When the infantryman dismounts from the back of the Bradley the situation is almost totally unknown to him even though he can get glimpses outside the vehicle through periscopes. Leaders must make a rapid METT-T analysis and decide on a course of action with limited information. We

must design the squad and platoon organization to facilitate rapid execution and movement under fire in various terrain conditions. With little warning, the infantryman must be prepared to clear buildings, trenches, and individual fighting positions. Rapidly changing situations with little time to make decisions will require flexible organizations. Additionally, the requirement for rapid action requires effective command and control and a mix of weapons that complement each other.

We should organize the rifle teams into groups that can rapidly adapt themselves to these different environments. The lethality of the battlefield has increased the importance of minutes and seconds. Rapid and effective action is necessary to ensure survival. Effective fire support coordinated with aggressive infantry action is essential. There are five general options open to the small unit leader once contact is made: establish a base of fire; maneuver left; maneuver right; maneuver front; or break contact. This limited number of options lends itself to drills to enhance teamwork, confidence and to develop cohesion. As systems get faster and the ability to move forces quickly from one place to another increases the trends caused by time space compression will continue. Small, flexible teams which are easily controlled and able to quickly adapt to changing circumstances would provide an organizational foundation for rapid action.

4. Changes caused by firepower.

Recent advances in weapons such as automatic cannons, automatic grenade launchers, Improved Conventional Munitions, scatterable mines, claymore type

mines, flechettes, and fuel-air explosives have once again increased the battlefield lethality. I will use the elements of combat power to analyze the impact of this increase in lethality. We must insure that the impact of these changes are considered in formulating infantry organization and doctrine.

PROTECTION

Historical responses to increased lethality on the battlefield are increased dispersion with a concurrent increase in supporting weapons for the destruction or suppression of the enemy, increased armor protection, reactive armor, increased personal protection through the use of the ground (entrenchments, reverse slopes and parapets or body armor), increased speed to reduce exposure time, camouflage, and the use of limited visibility and obscurants. Dispersion and suppression have an insidious relationship and are best analyzed together.

Dispersion, not between soldiers necessarily, but among smaller groups of soldiers is a method of coping with increased lethality.³¹ An increase in the range and lethality of weapons allows fewer soldiers to hold a greater amount of terrain in the defense. However, increased dispersion can make units susceptible to infiltration by reconnaissance elements or light/dismounted infantry.

Over time, the role of firepower has expanded from strictly killing to include suppression. Suppression is the ability of firepower to reduce the lethality of an opposing force's weapons for a limited time. The ability of firepower to suppress and destroy is the foundation of small unit maneuver under fire. As the density of

anti-armor weapons and automatic weapons to include automatic grenade launchers increase, the fires necessary for suppression will increase. Likewise, as the range of weapons increase the area over which weapons can be dispersed while still concentrating their effects will increase. Consequently, the need for suppressive fires increases.

The effectiveness of the attacker's supporting fires dictate the routine use of frontal parapet and reverse slope positions for survival. Dismounted infantry in the defense must, if at all possible, be placed in positions where they cannot receive effective fire without being able to return effective fire. Failure to accomplish this will result in their suppression and possible destruction. Fuel-air explosives make strong point defenses vulnerable to destruction. This makes it even more important for defending infantry to be positioned where they can not be detected until the attacker's infantry is engaged.

For the defender this means greater dispersion will reduce vulnerability to concentrated fires while maintaining their ability to concentrate combat power. For the attacker this means a greater area will have to be suppressed since the enemy will disperse, camouflage and protect himself. The Bradley's automatic cannon helps to fill this increased need for suppression. The automatic cannon used in conjunction with other direct and indirect fires can provide effective suppression allowing dismounted infantry to move quickly into the enemy's defenses to kill him or force him to surrender.

The increase in firepower available to the platoon and company has allowed

these units to occupy greater frontages but makes modern mechanized defense vulnerable to infiltration in rolling or forested terrain. Fewer infantrymen on a larger front reduces the capability for patrolling and local security. Because of the need to secure its own vehicles, Bradley equipped infantry can not provide security for tanks unless they are integrated somehow into the infantry defense. Increased dispersion will require decentralization of command and control. This decentralization will require a corresponding change in organization to facilitate command and control.

The use of limited visibility or obscurants provides the infantry with favorable conditions for attack. If it doesn't exist the infantryman can create it through the use of smoke. He can use smoke at night to blind image intensifiers and reduce the effects of natural and artificial illumination. He can use thermal obscuring smoke to reduce the effectiveness of thermal imagers. Fog and heavy rain can reduce the effectiveness of night vision devices facilitating dismounted infantry operations.

LEADERSHIP

The role of the leader and commander changed as the range and lethality of weapons increased. The maneuver unit commander became the agent of combat power. Technology provided the attacker and defender with the capability to concentrate tremendous amounts of combat power from dispersed locations. The commander on the ground is not only concerned with maneuver but also with the concentration of fires to support their maneuver. Today's leaders and commanders

of ground maneuver units are the "agents" that insure this combat power is effectively applied.

MANEUVER

All things being equal, when attacking enemy positions battlefield lethality has made the preferable choice an attack from the rear. The second choice is an attack from the flank, and the last resort is to attack from the front. The attack from the flank and rear has two primary advantages. First, it forces the enemy to focus in two different directions causing him to disperse his fires while the attacker concentrates his. Second, it forces the enemy to defend on terrain less suitable for defense or on ground he is not prepared to defend. Finally, the threat to the flank may cause the enemy's vehicles to move to new positions, exposing them to overwatching tanks and anti-armor systems.

When the infantry must use the last resort-- the frontal attack-- it faces a formidable task. The enemy has chosen and prepared the ground to prevent its seizure. Obstacles are emplaced, fires are interlocked and mutually supporting, indirect and direct supporting fires are planned and coordinated; in short the defender has done everything he can to cause the attacker to fail.

The attacker must accomplish several things to get across this deadly ground and into the enemy position. First he must suppress the defender with direct and indirect fires to prevent him from delivering effective fires. Second, he must open a path to the enemy position and create a hole in the enemy's defense. Third, he

must get into the interior of the enemy position, seize it and secure it.

To close on the position the attacker must use every means at his disposal to prevent the defender from firing or at least firing effectively. The infantryman's best techniques are based on surprise, limited visibility and coordination of fires to suppress and destroy the enemy in order to penetrate his position creating an assailable flank or exposing his rear.

If the dismounted infantry is pinned down or the attack stalls for any reason he is subject to devastating fires which will quickly neutralize or destroy him. If the infantry dismounted to facilitate the forward movement of the mechanized formation and the dismounted infantry attack fails then the mounted attack is in danger of stalling. If the mounted attack stalls the mechanized formation is vulnerable to CAS, artillery, direct fires and counterattack. The infantry requires adequate suppressive fires to ensure movement.

Penetrating into the depths of the enemy's defense, may require the infantry to reduce or assist in the reduction of obstacles and destroy or suppress enemy infantry covering the obstacle. For the infantry the primary focus is the enemy covering the obstacles. The defender relies on the effectiveness of his obstacles for defensive strength. Range cards, marked FPL's or PDF's allow automatic weapons fire to cover the obstacle even under conditions of limited visibility to prevent the infantry or engineers from breaching the obstacle. For this reason the infantry must neutralize the fires covering the obstacle before they can make a breach wide enough for vehicles.

The Bradley Fighting Vehicle can be of great assistance in the reduction of an enemy position. The dismounted infantry can guide the vehicle forward and use it to suppress or destroy bunkers, machine gun positions and lightly armored vehicles. Overwatching tanks and antiarmor systems can destroy enemy armored vehicles forced to move. Additionally, upon seizing the objective the Bradley vehicle may be the best protection for the infantry against indirect fires delivered by the enemy.

In the offense, the trend is toward decreasing the amount of infantry in the assault and increasing direct and indirect fire suppression to allow assaulting infantry to close on the position. Once the position is penetrated the infantry must quickly reduce it through the reduction of each position or until the enemy pulls out or surrenders.

The number of infantry decreased as the firepower supporting the infantry increased. This trend was noted in World War II.³² Col Perdue, a World War II veteran regimental commander, felt; "We infantrymen often use too many men in the attack. The truth is we use too many more often than we use too few." Using this thesis Col Perdue asked fourteen of his friends, all former regimental commanders in Europe and the Pacific, to comment; ten agreed, one was non-committal and three disagreed.³³ Col Perdue's primary concern was for the infantrymen who accompanied the assault but took no part other than perhaps limited moral assistance. It is well known most infantry casualties are caused by artillery fire. Thus, extra infantrymen in the assault put men at risk for no gain.

An historical analysis of assault techniques by Gen William E. DePuy points

out in successful assaults the assault element is the smallest, the exploitation element the largest and the suppression element in between the two. The ratio of support elements to assault elements ranged from 2 to 1 to 9 to 1. In a more current historical context Gen DePuy points out,

"There were, of course, hundreds of VC and NVA attacks against strong points or perimeters such as fire bases, Special Forces camps and district towns. Almost without exception, the attacking force consisted of a suppression element, an assault detachment and an exploitation force."³⁴

Col Fry, a regimental commander in Italy with an unusually successful combat record, makes the following point;

"Out of the entire pattern of instruction the need for coordinated FIRE and MANEUVER stands crystal clear. Two principles that combat infantrymen need to remember when closing with the enemy through heavy small arms fire are that **ONLY A MINIMUM NUMBER OF MEN SHOULD EXPOSE THEMSELVES SIMULTANEOUSLY** and that **MAXIMUM AIMED FIREPOWER MUST COVER ADVANCING INFANTRYMEN.**"³⁵

Fire and maneuver were common practice at the time. What Col Fry recognized was the supplemental training necessary to operate effectively using increased dispersion and decentralization.

The lethality on the battlefield will increase the need for dispersion and limited visibility operations. Increased dispersion and limited visibility operations require effective command and control. This combined with a need to accommodate the increased moral strain suggests the use of small flexible teams.

V. CONCLUSIONS

Organizations, weapons and training must be appropriate for the battlefield on which they will be used. Time-space compression and firepower continue to impact on the elements of combat power. Battlefield trends caused by time-space compression require organizations and leaders that can operate in narrow windows of opportunity. Small flexible teams organized around a weapon that provides effective suppressive fire will facilitate movement during close fighting. The weapons mix must adapt to the varied circumstances the team is likely to face. The team, not a drill, should form the basis for cohesion and teamwork necessary for reliable action in situations that place excessive strain on the morale of the soldier.

Squad articulation is necessary to move under fire. When supporting fires are masked the squad's automatic weapons provide the necessary suppression to continue movement. For this reason we should organize teams around automatic weapons and squads around teams. As the weapons in the squad change, the organization should change.

In the defense, as in the attack, the mix of weapons within the organization of dismounted infantry complement one another. Rifles, automatic rifles, machine guns, and grenade launchers all have different characteristics and functions within the organization. The proper mix determines how it will fight.

Teams based on complementary weapons facilitate reorganization or preparation for combat. Additionally, organized teams will make the training and assimilation of replacements more effective, thus increasing the survivability and the

effectiveness of the rifle team.

The continuing trends caused by increasing battlefield lethality will continue to increase dispersion and highlight the need to find ways to protect the infantryman. Increased dispersion will require decentralization of command and control in order to facilitate rapid action.

The current Bradley Platoon dismount element consists of three rifle teams of six men each.³⁶ The rifle team leader must control five men. Each rifle team is equipped with two Squad Automatic Weapons, a rifleman, an anti-armor specialist a grenadier and a rifle or M 203 carried by the rifle team leader.³⁷ The rifle team relies on drills or individual assignment of missions for action and is not organized for routine articulation on short notice. While drills facilitate rapid action and teamwork, they do not provide a firm foundation for cohesion.

The current organization of the rifle team is not adequate for the battlefield on which the Bradley infantryman must fight. A recent white paper circulated by the infantry School proposes an organization using a four man team.³⁸

MOUNTED ELEMENT

BFV 1	BFV 2	BFV 3	BFV 4
PLT LDR	MSTR GUNNER	CDR	PLT SGT
GUNNER	GUNNER	GUNNER	GUNNER
DRIVER	DRIVER	DRIVER	DRIVER
	ASST DRIVER	RTO	

DISMOUNTED ELEMENT

FIRST SQUAD		SECOND SQUAD	
SQUAD LDR		SQUAD LDR	
A TEAM	B TEAM	A TEAM	B TEAM
TM LDR (E5) M203	TM LDR M203	TM LDR M203	TM LDR M203
(E4) SAW	(E4) SAW	(E4) SAW	(E4) SAW
(E4) SAW	(E3) M203	(E4) SAW	(E3) M203
(E3) MAW/R	(E3) MAW/R	(E3) R	(E3) MAW/R
	MEDIC	FO & RTO	

Infantry School Proposal. Figure 6.

This is a positive step. The weapons mix of the four-man teams is the result of using what was available in the platoon. This may be a good interim measure, but some testing must be done to determine the best weapons mix. The firepower of two SAWs in a team is seductive but the length and weight make the SAW more difficult to use in close quarters than the M 16. The solution may be a shorter barrel and a folding stock for the SAW. The DRAGON is a clumsy and awkward weapon. This characteristic and the DRAGON's employment considerations may push for routine separation of the weapon from the four-man team. The antiarmor specialists may need to be centralized at squad or platoon level creating the

possibility of the dismounted nine man squad being employed in three teams of three. For example:

A TEAM	B TEAM	C TEAM
TM LDR (E5)M203	TM LDR(E5)M203	SQD LDR (E6)
(E4)SAW	(E4)SAW	(E3) MAW/R
(E4)SAW	(E3)M203	(E3) MAW/R
		(E3) MAW/R

Three-Man Team Organization. Figure 7.

The moral domain and the impact of time-space compression will normally require the platoon leader to accompany the maneuver element. The maneuver element can respond to enemy action or achieve a decision through the effective application of anti-armor and anti-infantry fire or by securing terrain. The platoon leader might remain in a critical dismounted infantry position which requires the moral support of the platoon leader's presence.

Moral cohesion between the mounted and dismounted elements must be maintained. The organization in figure 4 dissolves the squad composed of the vehicle team and carrier team, and substitutes a platoon organized into two distinct elements. The demands for mutual support between the vehicle and dismounted infantry, coupled with the moral strain of close combat demands a cohesive organization. Routine separation in training runs the risk of creating a rift between the mounted and dismounted elements which will cause a lack of coordination in

combat.

An effective dismounted infantry organization is absolutely essential to success on the battlefield. The importance of good infantry is learned over and over again. If the infantry fails, the combined arms team fails. Let's not risk failure because we have failed to maximize the capability of our few infantrymen. We must insure success by building a firm foundation with an effective organization that promotes aggressive, capable infantrymen.

There are very few infantrymen in Bradley organizations, some say not enough. We must get the greatest benefit out of the infantrymen we do have. The first step is finding the best organization and equipment mix for the dismounted infantrymen.

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